



REPORT
FOR
HARBOR CONSULTANTS, INC.
ATTN: MR. VICTOR VINEGRA, PRES.
444 PINE AVE.
GARWOOD, NJ 07027

TO CONDUCT A NON-TIDAL WETLAND DELINEATION ON A TRACT DESIGNATED
AS: BLOCK 294, LOTS 3,15 AND 14, KEARNY, NJ.

PREPARED BY:
NOVA CONSULTANTS LTD.
251 BURGUNDY LANE
NEWTOWN, PA 18940

JOHN F. SZCZEPANSKI, PHD.
PRINCIPAL INVESTIGATOR/PRESIDENT

SEPTEMBER 1990

TEST PROCEDURE

TEST PROCEDURES TO DETERMINE WETLAND BOUNDARIES

Tests are made by making soil borings and determining plant identities in the vicinity of each hole.

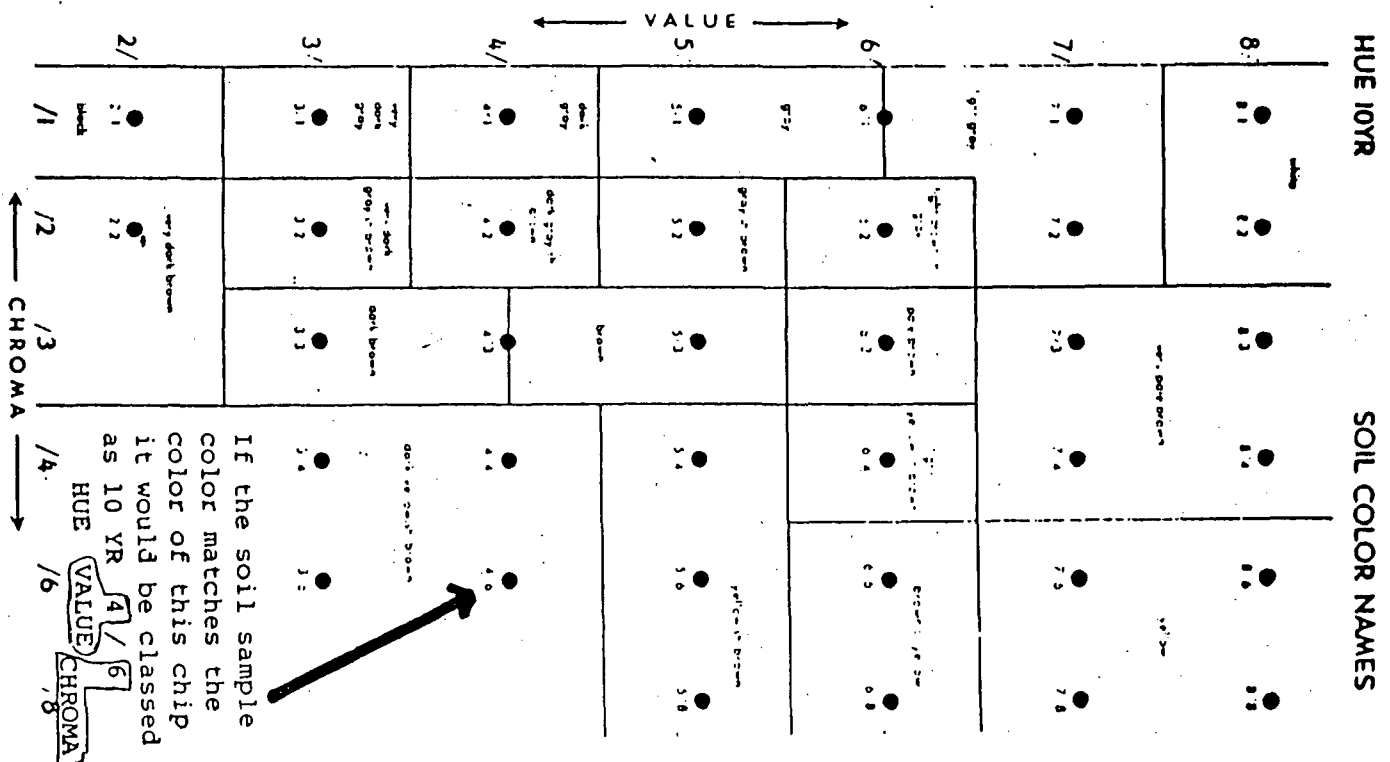
Soil borings are made at many locations where the wetlands boundaries appear to be located. The borings are from 12 inches to 3 feet. Three tests are applied at each soil boring site:

- (1) A soil color test including water table depth usually at a depth of 18-24 inches which is the depth range compliance utilized by the U.S. Army Corp of Engineers and the N.J.D.E.P. Bureau of Freshwater Wetlands.
- (2) The hydric or non-hydric classification of the soil is checked in the field against type as mapped in the USDA Soil Conservation Service's County Survey.
- (3) A hydric classification of all plants within 10 ft. of each soil boring site.

(1) SOIL

The Munsell Color Charts comprise a series of 9 cards with a total of 199 chips of intergrading colors. The soil color notation is developed as a three parameter system of HUE, VALUE and CHROMA.

The HUE notation is taken from the one of the nine cards used. The 20-30 color chips on each card are numbered in a vertical/horizontal grid. The vertically numbered rows of chips constitute the VALUE while the horizontally numbered rows of chips become the CHROMA. See sample below.



(2)

HYDRIC SOIL CLASSIFICATION

Soils in most counties are mapped by the U.S.D.A. Soil Conservation Service and displayed on aerial photo maps produced for each county. Wetlands are classified and displayed as overlays of U.S.G.S. quadrangles; these are produced for the National Wetlands Inventory. Each soil type has been assigned a hydric status by the National Wetlands Inventory staff. The hydric soil class thus forms the third parameter used for wetland delineation. Hydric/non-hydric soil data are also shown in Table I.

(3)

HYDRIC PLANT TEST

A hydric plant classification was produced with the U.S. Fish and Wildlife Service's Wetlands Inventory. The hydric or non-hydric status of each plant is one of the significant factors in determining wetland boundaries. These data are shown in Table II. The symbols used for hydric plant status are listed below.

ODL	Obligate wetland plant-always wetland
FAC-W	Facultative wetland plant-more commonly wetland
FAC	Facultative-wet or dry
FAC-U	Facultative wetland plant-more commonly upland
UPL	Upland plant-never wetland
N/C	Not classified-listed but not yet classified; may or may not be hydric

The wetland status of any location is determined as a combination of the Munsell hue/value/chroma rating, the hydric plant classification and the hydric/non-hydric soil classification and is shown on the data pages of Tables I and II. The summary page following provides the general determination.

Frequency of occurrence in wetland versus nonwetland across the entire distribution of the species. A frequency, for example, of 67%-99% (Facultative Wetland) means that 67%-99% of all individuals of a species that occur in an area occur in wetlands. A question mark following the indicator denotes a tentative assignment based upon the botanical literature and not confirmed by regional review. When two indicators are given, they reflect the range from the lowest to the highest frequency of occurrence in wetlands across the regions in which the species is found.

Obligate (OBL). Always found in wetlands under natural (not planted) conditions (frequency greater than 99%), but may persist in nonwetlands if planted there by man or in wetlands that have been drained, filled, or otherwise transformed into nonwetlands.

Facultative Wetland (FACW). Usually found in wetlands (67%-99% frequency), but occasionally found in nonwetlands.

Facultative (FAC). Sometimes found in wetlands (34%-66% frequency), but also occurs in nonwetlands.

Facultative Upland (FACU). Seldom found in wetlands (1%-33% frequency) and usually occurs in nonwetlands.

Nonwetland (UPL). Occurs in wetlands in another region, but not found (<1% frequency) in wetlands in the region specified. If a species does not occur in wetlands in any region, it is not on the list.

Drawdown (DRA). Typically associated with the drier stages of wetlands, such as mud flats, vernal pools, and playa lakes.

WETLAND DETERMINATION

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DATA FORM

ROUTINE ONSITE DETERMINATION METHOD

Lead Investigator(s): JFS/BB
 Project/site: TOWN OF KEARNY
 Applicant:

Boring# 1
 Date: 6-21-90
 State: NJ County: HUDSON
 Plant Community: FALLOW FIELD

Do normal environmental conditions exist at the plant community?
 Yes No ☒ PREVIOUS CONSTRUCTION FILL
 Has the vegetation, soils and/or hydrology been significantly disturbed?
 Yes ☒ No PREVIOUS FILL ACTIVITIES

VEGETATION

Indicator	Indicator
Dominant Plant Species Status Stratum	Dominant Plant Species Status Stratum
1. PHRAGMITES AUSTRALIS FACW HERB	11.
2. AMBROSIA ARTEMISIIFOLIA FACU "	12.
3. POLYGONUM PENSYLVANICUM FACW "	13.
4. MELILOTUS OFFICINALIS NL "	14.
5. ARTEMISIA VULGARIS FACU "	15.
6. THLASPI ARVENSE NL "	16.
7. LEPIDIUM CAMPESTRE NL "	17.
8.	18.
9.	19.
10.	20.

Percent of dominant species that are OBL, FAC and/or FAC: 28%
 Is the hydrophytic vegetation criterion met? Yes No ☒
 Rationale: FILL AREA CONTAINING UNCONSOLIDATED

SOILS

Boring depth: 12"
 Series/phase: UNCONSOLIDATED FILL MATERIAL Subgroup: UNKNOWN ORIGIN
 Is the soil on the hydric soils list? Yes No ☒ Undetermined
 Is the soil a histosol? Yes No ☒ Histic epipedon present? Yes No ☒
 Is the soil: Mottled? Yes No ☒ Gleyed? Yes No ☒
 Matrix Color: 5YR 4/4 Mottle Colors: NONE OBSERVED
 Other hydric soil indicators: NONE
 Is the hydric soil criterion met? Yes No ☒
 Rationale:

HYDROLOGY

Is the ground surface inundated? Yes No ☒ Surface water depth: NONE
 Is the soil saturated? Yes No ☒ OBSERVED
 Depth to free-standing water in pit/soil probe hole: NONE OBSERVED
 List other field evidence of surface inundation or soil saturation: NO
 OBSERVED EVIDENCE
 Is the wetland hydrology criterion met? Yes No ☒
 Rationale: NO OBSERVED EVIDENCE

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No ☒
 Rationale for jurisdictional decision: FALLOW FIELD CONTAINING OLD CONSTRUCTION
 UNCONSOLIDATED UPLAND CONDITIONS

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DATA FORM

ROUTINE ONSITE DETERMINATION METHOD

Boring# 2

Investigator(s):

Date:

Site:

State:

County:

Plant Community:

FALLOW FIELD

normal environmental conditions exist at the plant community?

X No PREVIOUS CONSTRUCTION FILL

the vegetation, soils and/or hydrology been significantly disturbed?

X No PREVIOUS CONSTRUCTION FILL

VEGETATION

Indicator	Indicator
Dominant Plant Species Status Stratum	Dominant Plant Species Status Stratum
SIMILAR TO B-1	11.
	12.
	13.
	14.
	15.
	16.
	17.
	18.
	19.
	20.

percent of dominant species that are OBL, FAC and/or FAC: 28%

the hydrophytic vegetation criterion met? Yes No X

Rationale: UPLAND FILL AREA

SOILS

Boring depth: 18"

Soil type/phase: ALLUVIAL LAND

Subgroup: UNKNOWN ORIGIN

the soil on the hydric soils list? Yes No X Undetermined

the soil a histosol? Yes No X Histic epipedon present? Yes No X

the soil: Mottled? Yes X No Gleyed? Yes X No

Soil Color: 10YR 6/2 Mottle Colors: 10YR 5/1

Other hydric soil indicators: NONE

the hydric soil criterion met? Yes No X

Rationale: IMPERMEABLE MATERIAL AT 18", CONSTRUCTION FILL MATERIAL

HYDROLOGY

the ground surface inundated? Yes X No Surface water depth: INTERMIT-

the soil saturated? Yes X No TENT VARYING

Depth to free-standing water in pit/soil probe hole: 18"

Is there other field evidence of surface inundation or soil saturation: INTERMIT-

T PONDING

the wetland hydrology criterion met? Yes No X

Rationale:

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes X No

Rationale for jurisdictional decision: DISTURBED AREA OF ORIGINAL MARSH LIKE

CONSTRUCTION FILL AREA EXCAVATED AT DELINEATED WETLAND LINE.

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DATA FORM

ROUTINE ONSITE DETERMINATION METHOD

Boring# 3

Field Investigator(s):

Date:

Project/site:

State:

County:

Applicant:

Plant Community: FILL MARSH ECOTONE

Do normal environmental conditions exist at the plant community?

Yes No X

Has the vegetation, soils and/or hydrology been significantly disturbed?

Yes X No PREVIOUS BORDER OF CONSTRUCTION FILL

VEGETATION

Indicator			Indicator		
Dominant Plant Species	Status	Stratum	Dominant Plant Species	Status	Stratum
1. POPULUS DELTOIDES	FAC	TREE	11.		
2. AMBROSIA ARTEMISIIFOLIA	FACU	HERB	12.		
3. POLYGONUM PENSYLVANICUM	FACW	"	13.		
4. SOLIDAGO ALTISSIMA	FACU	"	14.		
5. PHRAGMITES AUSTRALIS	FACW	"	15.		
6. ARTEMISIA VULGARIS	FACU	"	16.		
7. THASPI ARVENSE	NL	"	17.		
8.			18.		
9.			19.		
10.			20.		

Percent of dominant species that are OBL, FAC and/or FAC: 42%

Is the hydrophytic vegetation criterion met? Yes No X

Rationale: PEM/FILL AREA ALONG ORIGINAL MARSH AREA PROBLEM WETLAND SITUATION

SOILS

Series/phase: MUCK ALLUVIAL LAND Boring depth: 18"
Subgroup: UNKNOWN ORIGIN
Is the soil on the hydric soils list? Yes No X Undetermined
Is the soil a histosol? Yes X No Histic epipedon present? Yes No X
Is the soil: Mottled? Yes No X Gleyed? Yes No X
Matrix Color: 7.5YR 3/0 Mottle Colors: NONE OBSERVED
Other hydric soil indicators: NONE
Is the hydric soil criterion met? Yes X No
Rationale: HISTOSOLIC CONDITIONS

HYDROLOGY

Is the ground surface inundated? Yes No X Surface water depth: NONE
Is the soil saturated? Yes X No OBSERVED
Depth to free-standing water in pit/soil probe hole: 18"
List other field evidence of surface inundation or soil saturation: INTERMITTENT SURFACE PONDING/RUNOFF
Is the wetland hydrology criterion met? Yes X No
Rationale: HYDRIC SOIL CONDITIONS WITHIN ORIGINAL AREA OF MARSH WETLAND DRAINAGE PATTERN

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes X No
Rationale for jurisdictional decision: INTERMITTENT DRAINAGE AREA ADJACENT

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DATA FORM

ROUTINE ONSITE DETERMINATION METHOD

Boring# 4

Field Investigator(s):
 Subject/site:
 Applicant:

Date:
 State: County:
 Plant Community:PEM

Do normal environmental conditions exist at the plant community?

Yes X No

Has the vegetation, soils and/or hydrology been significantly disturbed?

Yes X No

VEGETATION

Indicator			Indicator		
Dominant Plant Species	Status	Stratum	Dominant Plant Species	Status	Stratum
1.PHRAGMITES AUSTRALIS	FACW	HERB	11.		
2.ALLIARIA PETIOLATA	NR	"	12.		
3.POLYGONUM PENNSYLVANICUM	FACW	"	13.		
4.AMBROSIA ARTEMISIIFOLIA	FACU	"	14.		
5.ARTEMISIA VULGARIS	FACU	"	15.		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

Percent of dominant species that are OBL,FAC and/or FAC: 40%

Is the hydrophytic vegetation criterion met? Yes No X

Rationale:PEM FRINGE AREA OF POW MARSH AREA

SOILS

Series/phase: MUCK ALLUVIAL LAND Boring depth: 16"
 Subgroup:UNKNOWN ORIGIN
 Is the soil on the hydric soils list? Yes No X Undetermined
 Is the soil a histosol? Yes X No Histic epipedon present? Yes No X
 Is the soil: Mottled? Yes No X Gleyed? Yes No X
 Matrix Color: 7.5YR 3/0 Mottle Colors: NONE OBSERVED
 Other hydric soil indicators: NONE
 Is the hydric soil criterion met? Yes No X
 Rationale:HISTOSOLIC ALLUVIAL DEPOSIT

HYDROLOGY

Is the ground surface inundated? Yes X No Surface water depth:VARYING
 Is the soil saturated? Yes X No
 Depth to free-standing water in pit/soil probe hole:12"
 List other field evidence of surface inundation or soil saturation:HYDRIC
 SOIL CONDITION
 Is the wetland hydrology criterion met? Yes X No
 Rationale:WETLAND DRAINAGE PATTERN

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes X No
 Rationale for jurisdictional decision: PEM/POW ECOTONE ALONG BANK OF DELINEATED
 WETLAND AREA.

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DATA FORM

ROUTINE ONSITE DETERMINATION METHOD

Field Investigator(s):

Date:

Boring# 5

Project/site:

State: County:

Applicant:

Plant Community: FALLOW FIELD

Do normal environmental conditions exist at the plant community?

Yes No X

Has the vegetation, soils and/or hydrology been significantly disturbed?

Yes X No PREVIOUS FILL AREA

VEGETATION

Indicator			Indicator		
Dominant Plant Species	Status	Stratum	Dominant Plant Species	Status	Stratum
1.PHRAGMITES AUSTRALIS	FACW	HERB	11.		
2.AMBROSIA ARTEMISIIFOLIA	FACU	"	12.		
3.ARTEMISIA VULGARIS	FACU	"	13.		
4.			14.		
5.			15.		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

Percent of dominant species that are OBL, FAC and/or FAC: 33%

Is the hydrophytic vegetation criterion met? Yes No X

Rationale:UPLAND FILL AREA ALONG TOE OF DRAINAGE DITCH

SOILS

Series/phase: UNCONSOLIDATED FILL MATERIAL Boring depth: 12"
Subgroup:UNKNOWN ORIGIN
Is the soil on the hydric soils list? Yes No Undetermined X
Is the soil a histosol? Yes No X Histic epipedon present? Yes No X
Is the soil: Mottled? Yes No X Gleyed? Yes No X
Matrix Color: 10YR 5/4 Mottle Colors: NONE OBSERVED
Other hydric soil indicators: NONE
Is the hydric soil criterion met? Yes No X
Rationale:UNCONSOLIDATED CONSTRUCTION MATERIAL CONCRETE AT 13"

HYDROLOGY

Is the ground surface inundated? Yes No X Surface water depth:NONE
Is the soil saturated? Yes No X OBSERVED
Depth to free-standing water in pit/soil probe hole:NONE
List other field evidence of surface inundation or soil saturation:NONE
Is the wetland hydrology criterion met? Yes No X
Rationale:NO OBSERVED EVIDENCE

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No X
Rationale for jurisdictional decision:UPLAND BANK AREA OF FILL MATERIAL
ADJACENT TO A DRAINAGE DITCH

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DATA FORM

ROUTINE ONSITE DETERMINATION METHOD

Field Investigator(s):
Project/site:
Applicant:

Boring# 6
Date:
State: County:
Plant Community: DRAINAGE DITCH

Do normal environmental conditions exist at the plant community?

Yes No X

Has the vegetation, soils and/or hydrology been significantly disturbed?

Yes X No PREVIOUS FILL AND EXCAVATION

VEGETATION

Indicator			Indicator		
Dominant Plant Species	Status	Stratum	Dominant Plant Species	Status	Stratum
1. POPULUS DELTOIDES	FAC	SAPLING	11.		
2. PHRAGMITES AUSTRALIS	FACW	HERB	12.		
3. ARTEMISIA VULGARIS	FACU	"	13.		
4. SOLIDAGO ALTISSIMA	FACU-	"	14.		
5.			15.		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

Percent of dominant species that are OBL, FAC and/or FAC: 50%

Is the hydrophytic vegetation criterion met? Yes X No

Rationale: PEM1 HABITAT CONDITIONS

SOILS

Series/phase: ALLUVIAL LAND Boring depth: 16"
Subgroup: UNKNOWN ORIGIN
Is the soil on the hydric soils list? Yes No Undetermined X
Is the soil a histosol? Yes X No Histic epipedon present? Yes No X
Is the soil: Mottled? Yes No X Gleyed? Yes No X
Matrix Color: 7.5YR 3/0 Mottle Colors: NONE OBSERVED
Other hydric soil indicators: NONE
Is the hydric soil criterion met? Yes X No
Rationale: HISTOSOLIC ALLUVIAL DEPOSITION

HYDROLOGY

Is the ground surface inundated? Yes X No Surface water depth: VARYING/
Is the soil saturated? Yes X No INTERMITTENT
Depth to free-standing water in pit/soil probe hole: IMMEDIATE
List other field evidence of surface inundation or soil saturation: HYDRIC
SOIL CONDITIONS
Is the wetland hydrology criterion met? Yes X No
Rationale: WETLAND DRAINAGE PATTERN

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes X No
Rationale for jurisdictional decision: PEM1 HABITAT CONDITIONS WITHIN LINEAR
DRAINAGE DITCH AREA PARALLELING THE SOUTHERLY BOUNDARY

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DATA FORM

ROUTINE ONSITE DETERMINATION METHOD

Boring# 7

Field Investigator(s):

Date:

Project/site:

State: County:

Applicant:

Plant Community: DRAINAGE AREA MARSH

Do normal environmental conditions exist at the plant community?

Yes No X

Has the vegetation, soils and/or hydrology been significantly disturbed?

Yes X No PREVIOUS CONSTRUCTING FILL R.O.W. MAINTENANCE

VEGETATION

Indicator			Indicator		
Dominant Plant Species	Status	Stratum	Dominant Plant Species	Status	Stratum
1. PHRAGMITES AUSTRALIS	FACW	HERB	11.		
2.			12.		
3.			13.		
4.			14.		
5.			15.		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

Percent of dominant species that are OBL, FAC and/or FAC: 99%

Is the hydrophytic vegetation criterion met? Yes X No

Rationale: PEM1 HABITAT SUBSYSTEM

SOILS

Series/phase: MUCK ALLUVIAL LANDS Boring depth: 10"
 Subgroup: UNKNOWN ORIGIN
 Is the soil on the hydric soils list? Yes No Undetermined X
 Is the soil a histosol? Yes X No Histic epipedon present? Yes No X
 Is the soil: Mottled? Yes No X Gleyed? Yes No X
 Matrix Color: 7.5YR 3/0 Mottle Colors: NONE OBSERVED
 Other hydric soil indicators: NONE
 Is the hydric soil criterion met? Yes X No
 Rationale: HISTOSOLIC DEPOSITION

HYDROLOGY

Is the ground surface inundated? Yes X No Surface water depth: VARYING
 Is the soil saturated? Yes X No INTERMITTENT
 Depth to free-standing water in pit/soil probe hole: IMMEDIATE
 List other field evidence of surface inundation or soil saturation: HYDRIC
 SOIL CONDITIONS
 Is the wetland hydrology criterion met? Yes X No
 Rationale: WETLAND DRAINAGE PATTERN

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes X No
 Rationale for jurisdictional decision: PEM1 HABITAT CONDITIONS WITHIN A
 DRAINAGE DITCH AREA, FILL BOTH BANKS

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DATA FORM

ROUTINE ONSITE DETERMINATION METHOD

Field Investigator(s):

Boring# 8

Subject/site:

Date:

Applicant:

State:

County:

Plant Community:FALLOW FIELD

Do normal environmental conditions exist at the plant community?

Yes No X

Has the vegetation, soils and/or hydrology been significantly disturbed?

Yes X No PREVIOUS UNCONSOLIDATED FILL CONDITION

VEGETATION

Indicator			Indicator		
Dominant Plant Species	Status	Stratum	Dominant Plant Species	Status	Stratum
1. ROSA MULTIFLORA	FACU	SHRUB	11.		
2. AMBROSIA ARTEMISIIFOLIA	FACU	HERB	12.		
3. PHRAGMITES AUSTRALIS	FACW	"	13.		
4. ARTEMISIA VULGARIS	FACU	"	14.		
5.			15.		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

Percent of dominant species that are OBL, FAC and/or FAC: 25%

Is the hydrophytic vegetation criterion met? Yes No X

Rationale: UPLAND AREA OF FILL ABOVE PEM CONDITION

SOILS

Series/phase: UNCONSOLIDATED FILL Boring depth: 10"
Subgroup: UNKNOWN ORIGIN
Is the soil on the hydric soils list? Yes No Undetermined X
Is the soil a histosol? Yes No X Histic epipedon present? Yes No X
Is the soil: Mottled? Yes No X Gleyed? Yes No X
Matrix Color: 7.5YR 5/6 Mottle Colors: NONE OBSERVED
Other hydric soil indicators: NONE
Is the hydric soil criterion met? Yes No X
Rationale: CONSTRUCTION FILL DOMESTIC WASTE, IMPERVIOUS AT 11"

HYDROLOGY

Is the ground surface inundated? Yes No X Surface water depth: NONE
Is the soil saturated? Yes No X OBSERVED
Depth to free-standing water in pit/soil probe hole: NONE OBSERVED
List other field evidence of surface inundation or soil saturation: NONE
OBSERVED
Is the wetland hydrology criterion met? Yes No X
Rationale: NO OBSERVED EVIDENCE

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No X
Rationale for jurisdictional decision: PREVIOUSLY FILLED BANK AREA UPLAND FROM
AGE DITCH.

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DATA FORM

ROUTINE ONSITE DETERMINATION METHOD

Field Investigator(s):
Object/site:
Applicant:

Boring# 9
Date:
State: County:
Plant Community: MARSH/DRAINAGE DITCH

Do normal environmental conditions exist at the plant community?

Yes No X

Has the vegetation, soils and/or hydrology been significantly disturbed?

Yes X No PREVIOUS CONSTRUCTION FILL R.O.W. MAINTENANCE

VEGETATION

Indicator			Indicator		
Dominant Plant Species	Status	Stratum	Dominant Plant Species	Status	Stratum
1. PHRAGMITES AUSTRALIS	FACW	HERB	11.		
2.			12.		
3.			13.		
4.			14.		
5.			15.		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

Percent of dominant species that are OBL, FAC and/or FAC: 99%

Is the hydrophytic vegetation criterion met? Yes X No

Rationale: PEM1 SUBSYSTEM CHARACTERISTICS

SOILS

Series/phase: MUCK ALLUVIAL DEPOSITION Subgroup: UNKNOWN ORIGIN
Is the soil on the hydric soils list? Yes No Undetermined X
Is the soil a histosol? Yes X No Histic epipedon present? Yes No X
Is the soil: Mottled? Yes No X Gleyed? Yes No X
Matrix Color: 7.5YR 3/0 Mottle Colors: NONE OBSERVED
Other hydric soil indicators: NONE
Is the hydric soil criterion met? Yes X No
Rationale: HISTOSOLIC ALLUVIAL DEPOSITION

HYDROLOGY

Is the ground surface inundated? Yes X No Surface water depth: VARYING
Is the soil saturated? Yes X No
Depth to free-standing water in pit/soil probe hole: IMMEDIATE
List other field evidence of surface inundation or soil saturation: HYDRIC
SOIL CONDITIONS
Is the wetland hydrology criterion met? Yes X No
Rationale: WETLAND DRAINAGE PATTERN

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes X No
Rationale for jurisdictional decision: PEM1 HABITAT CONDITIONS WITHIN WETLAND
DRAINAGE DITCH AREA.

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DATA FORM

ROUTINE ONSITE DETERMINATION METHOD

Field Investigator(s):

Date:

Boring# 10

Project/site:

State: County:

Applicant:

Plant Community:FALLOW FIELD

Do normal environmental conditions exist at the plant community?

Yes No X

Has the vegetation, soils and/or hydrology been significantly disturbed?

Yes X No PREVIOUS FILL

VEGETATION

Indicator			Indicator		
Dominant Plant Species	Status	Stratum	Dominant Plant Species	Status	Stratum
1.PRUNUS SEROTINA	NC	SAPLING	11.		
2.PHRAGMITES AUSTRALIS	FACW	HERB	12.		
3.ARTEMISIA VULGARIS	FACU	"	13.		
4.AMBROSIA ARTEMISIIFOLIA	FACU	"	14.		
5.			15.		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

Percent of dominant species that are OBL,FAC and/or FAC: 25%

Is the hydrophytic vegetation criterion met? Yes No X

Rationale:UPLAND BANK CONTAINING UNCONSOLIDATED FILL

SOILS

Series/phase: UNCONSOLIDATED FILL MATERIAL Subgroup:UNKNOWN ORIGIN Boring depth: 14"

Is the soil on the hydric soils list? Yes No Undetermined X

Is the soil a histosol? Yes No X Histic epipedon present? Yes No X

Is the soil: Mottled? Yes No X Gleyed? Yes No X

Matrix Color: 7.5YR 4/6 Mottle Colors: NONE OBSERVED

Other hydric soil indicators:NONE

Is the hydric soil criterion met? Yes No X

Rationale:EXTRACTED SOIL FILL MATERIAL

HYDROLOGY

Is the ground surface inundated? Yes No X Surface water depth:NONE

Is the soil saturated? Yes No X OBSERVED

Depth to free-standing water in pit/soil probe hole:NONE

List other field evidence of surface inundation or soil saturation:NONE

Is the wetland hydrology criterion met? Yes No X

Rationale: NO OBSERVED EVIDENCE

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes No X

Rationale for jurisdictional decision:UPLAND PREVIOUSLY FILLED AREA CONTAINING UNKNOWN ORIGIN(SOLIUM)OVER CONSTRUCTION FILL.

WETLAND SUMMARY

SUMMARY OF ON SITE PALUSTRINE HABITAT CONDITIONS

PALUSTRINE HABITAT CONDITIONS WITHIN THE TRACT EXIST AS TWO DISJUNCT AREAS LOCATED WITHIN THE SOUTHERLY HALF OF THE SITE DESIGNATED AS AREA 'A' AND AREA 'C' AND WERE PREVIOUSLY FLOODPLAIN AREA OF THE PASSAIC RIVER(REFER TO MAP E).

THE ENTIRE SITE IS SURROUNDED BY PREVIOUS WAY AND STREET CONSTRUCTION ALONG THE NORTH, EASTERLY AND SOUTHERLY BOUNDARIES AND AN ELECTRIC R.O.W./MAINTENANCE ROAD AND AN INDUSTRIAL COMPLEX ALONG THE WESTERLY BOUNDARY.

ALSO, THE ENTIRE SITE WAS PREVIOUSLY FILLED MARSH AREA WITH OLD CONSTRUCTION FILL AND DOMESTIC WASTE THROUGHOUT WITH THE EXCEPTION OF THE DELINEATED WETLAND AREAS AFOREMENTIONED.

ALTHOUGH MAPPED BY USF&W ELIZABETH/ORANGE NJ QUADRANGLE AS CONTAINING POW AND PEM SUBSYSTEM HABITATS IT IS DIFFICULT TO ASCERTAIN IF THE MAPPED AREAS AND THE APPROXIMATE SITE LOCATION COINCIDE WITH THE DELINEATED AREAS ON THE SITE PLAN(MAP F).

FURTHER THE PREVIOUS HISTORIC DEGRADATION OF THE ENTIRE SITE AND ESPECIALLY THE WETLAND AREAS SEVERELY AFFECTS AND LIMITS THE QUALITY OF THE HABITATS ESTABLISHED AS PALUSTRINE.

WETLAND AREA 'A' IS A DISJUNCT R.O.W.(PALUSTRINE OPEN WATER IMPOUNDED) CONTAINING FRINGE AREA OF PEM/PSS1(PALUSTRINE HERBACEOUS EMERGENT PERSISTENT/PALUSTRINE SCRUB SHRUB BROAD LEAVED DECIDUOUS) DOMINATED BY PHRAGMITES AUSTRALIS, POPULUS AND SALIX SAPLINGS AND ALONG AREAS OF IRREGULAR FILL SPOIL. THIS AREA ALSO CONTAINS LARGER EXAMPLES OF THESE TREE SPECIES.

THIS WETLAND AREA IS DISJUNCT AND IS SEPARATED BY FILL SPOIL.

WETLAND AREA 'C' IS REPRESENTATIVE OF A DRAINAGE SWALE CONTAINING PEM HABITAT CHARACTERISTICS FOUND ALONG THE SOUTHERLY SIDE BOUNDARY WITH A CONFLUENCE WHICH RUNS ALONG THE WESTERN BOUNDARY BOTH DRAIN SOUTHERLY AND OUTBOUND.

THE SOUTHERLY BOUNDARY DELINEATION OF THIS WETLAND LINE CONTAINED NO SURFACE HYDROLOGY WITH THE WESTERLY PORTION CONTAINING AREAS OF ISOLATED SURFACE HYDROLOGY. THIS WESTERLY DRAINAGE SWALE CONTINUES NORTHERLY OUTBOUND AND CONTIGUOUS TO THE WESTERLY SITE BOUNDARY AND BETWEEN THE ELECTRIC R.O.W. MAINTENANCE ROAD. THE ENTIRE LENGTH OF THESE SWALE AREAS CONTAINS UNCONSOLIDATED CONSTRUCTION FILL AND DOMESTIC WASTE FORMING A BANK OR SLOPE.

THIS SWALE AREA IS DOMINATED BY PHRAGMITES AUSTRALIS THROUGHOUT ITS LENGTH WITHIN THE SITE AND IS SEVERELY DISTURBED. THE TOTAL AREA DELINEATED AS PALUSTRINE HABITAT IS 1.71 AC.

IN ESSENCE, THE WETLAND AREAS WITHIN THIS TRACT ARE SEVERELY DEGRADATED WITH LOW SPP. DIVERSITY WITH WETLAND AREA 'A' COMPLETELY SURROUNDED AND IMPACTED BY FILL WITH WETLAND AREA 'C' DISPLAYING SIMILAR DISTURBANCE AND IS UTILIZED PRIMARILY AS A DRAINAGE SWALE FOR THE HIGHWAY AND SURROUNDING INDUSTRIAL AND STREET RUNOFF.

NO OTHER AREA WITHIN THE SITE EXHIBITED CHARACTERISTICS ATTRIBUTED TO PALUSTRINE HABITAT CONDITIONS.

APPENDIX I

TABLES

ABLE # I

100115

E # II

USF & WS

100116

EX # IV

USF & WS
HYDRIC
CLASS

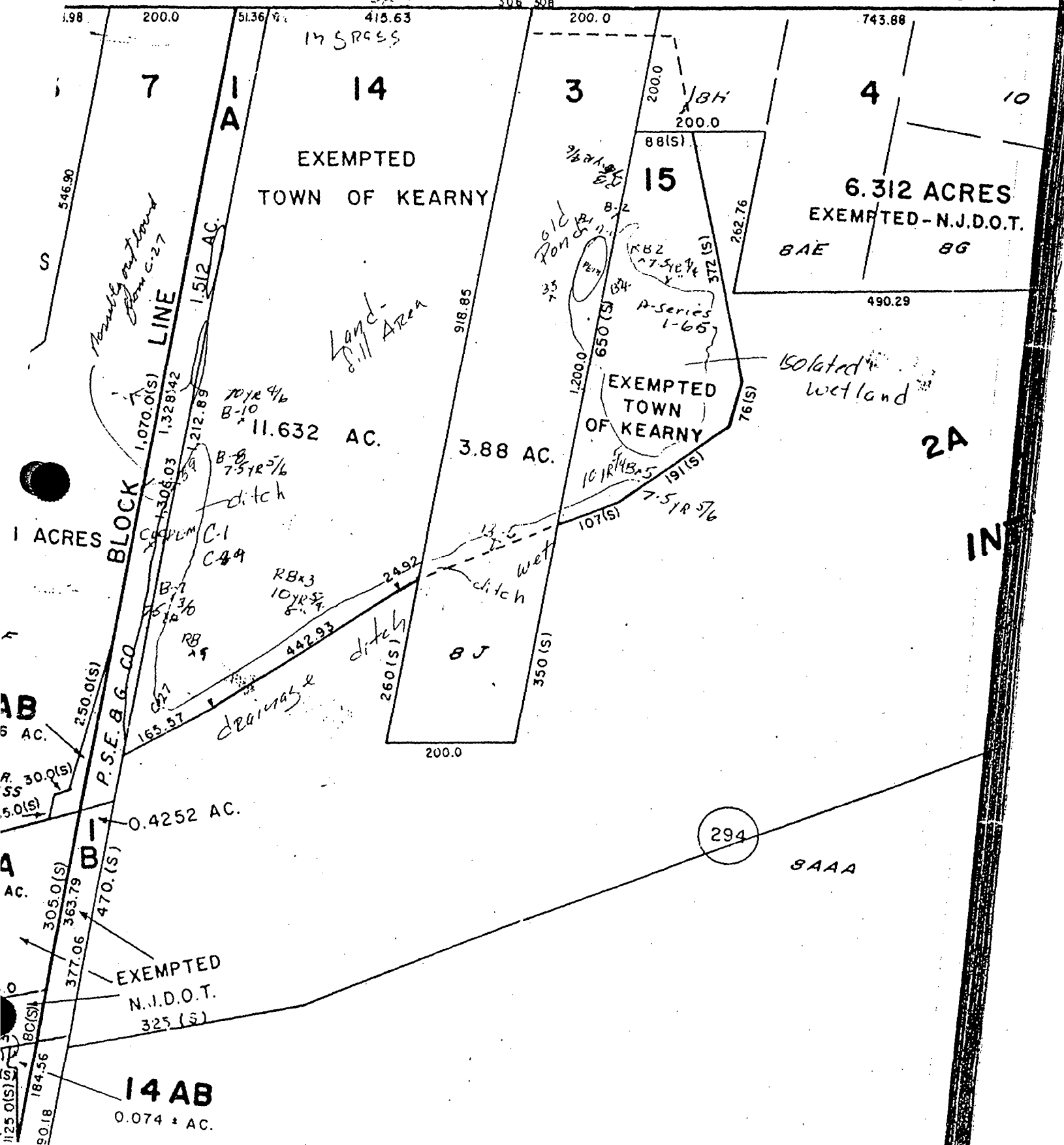
APPENDIX II

MAPS

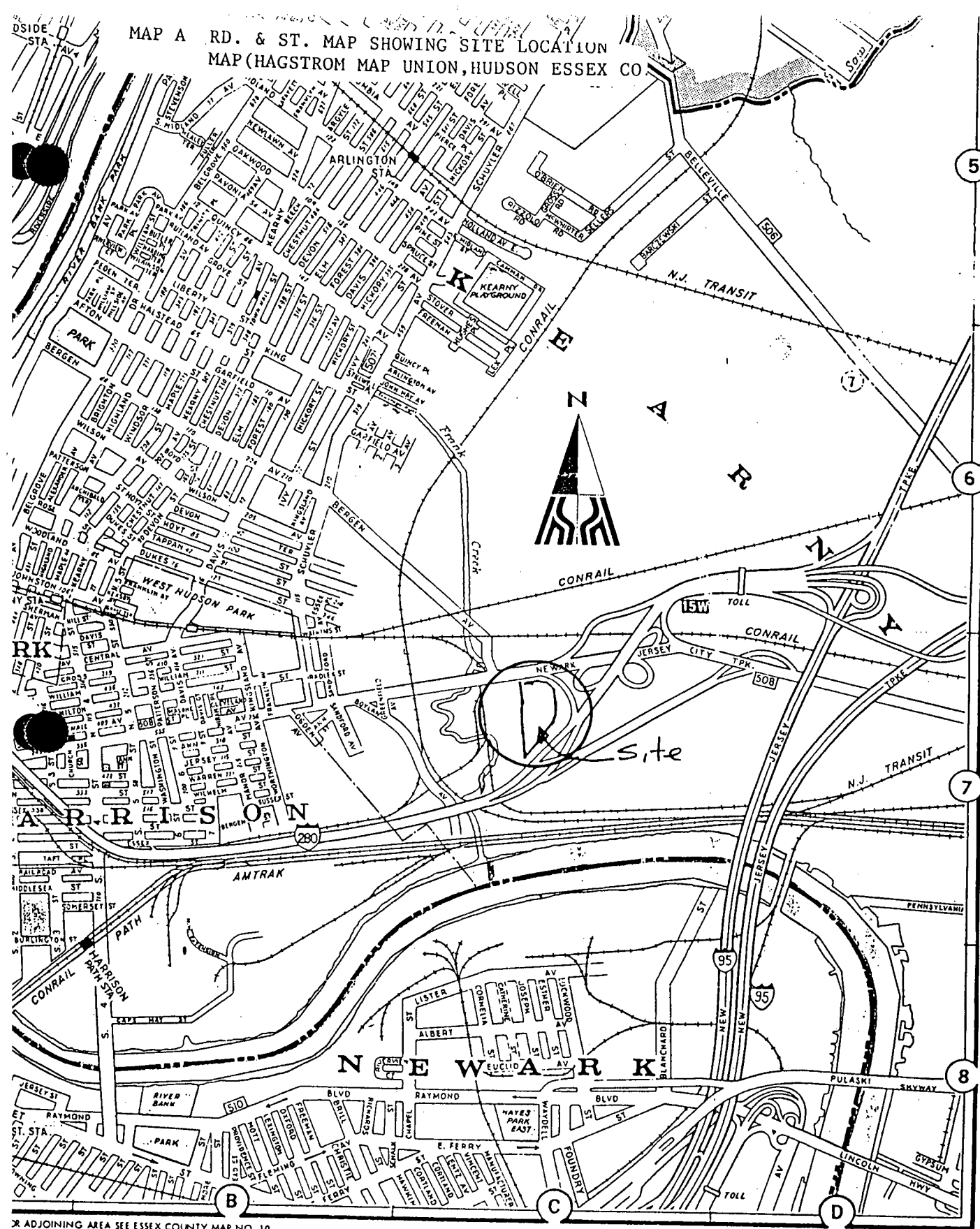
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JERSEY

CITY



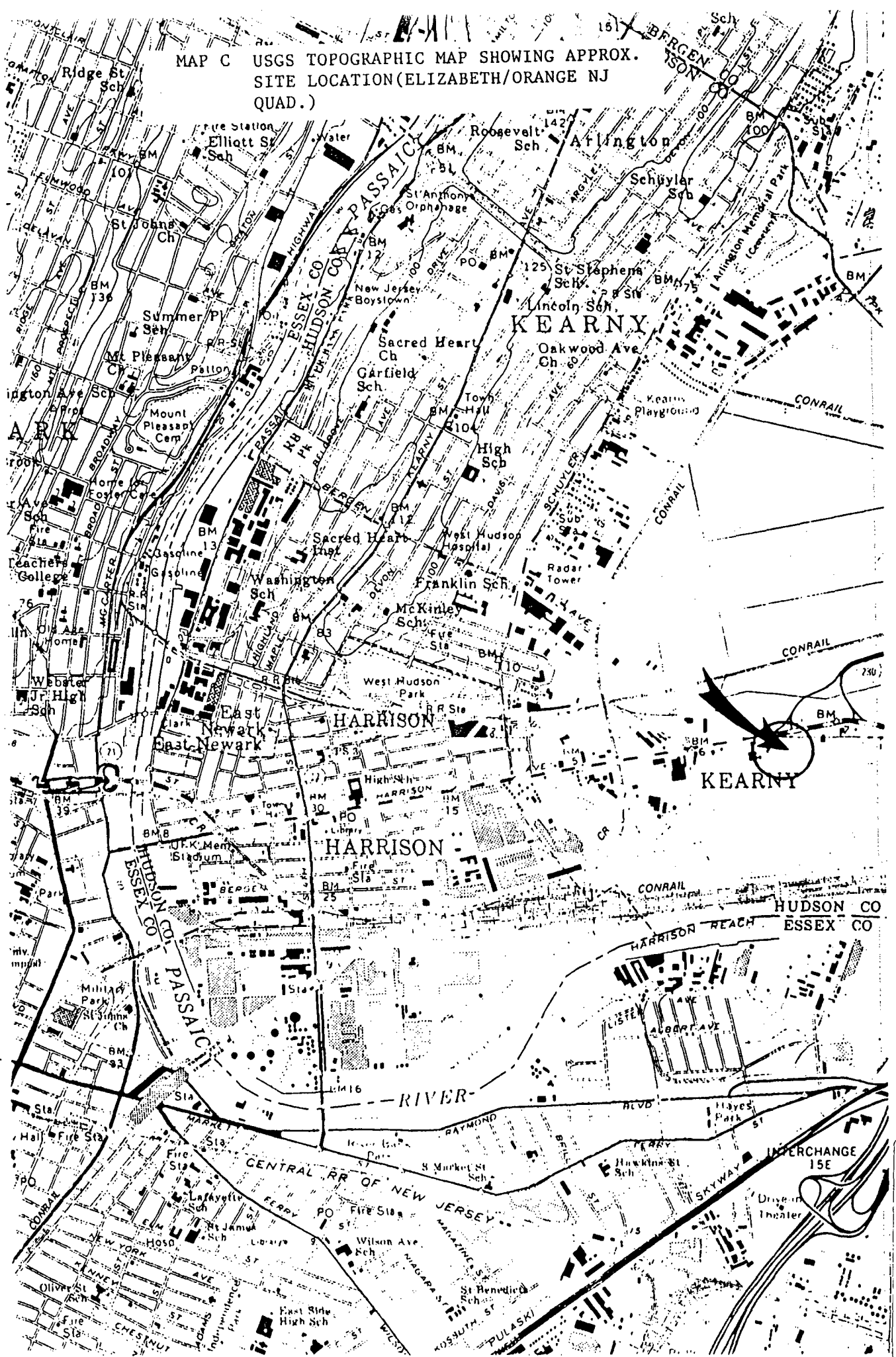
MAP A RD. & ST. MAP SHOWING SITE LOCATION
 MAP (HAGSTROM MAP UNION, HUDSON ESSEX CO.



SEE ADJOINING AREA SEE MAP NO. 2

SEE ADJOINING AREA SEE ESSEX COUNTY MAP NO. 10

MAP C USGS TOPOGRAPHIC MAP SHOWING APPROX.
SITE LOCATION(ELIZABETH/ORANGE NJ
QUAD.)

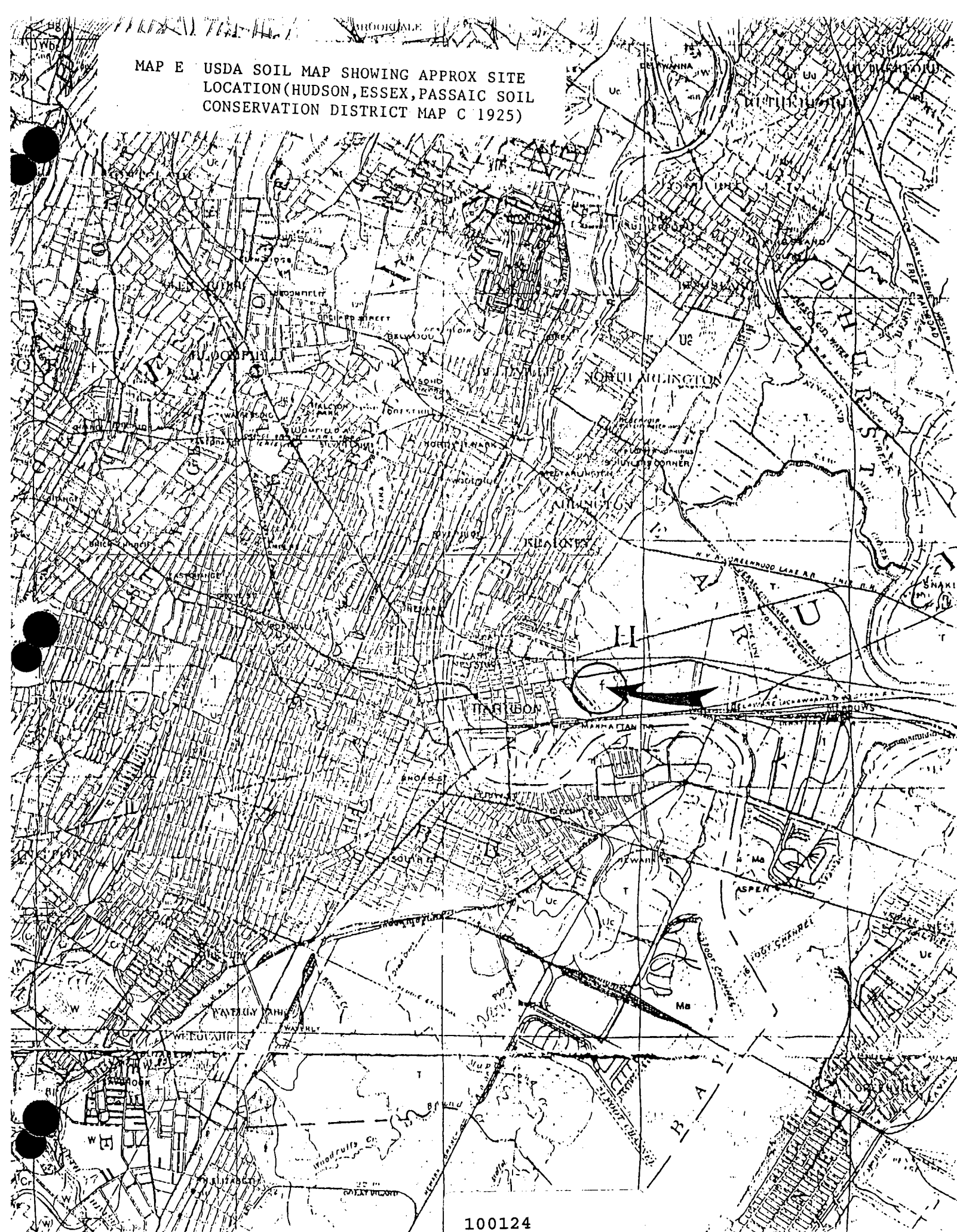


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MAP E USDA SOIL MAP SHOWING APPROX SITE
LOCATION (HUDSON, ESSEX, PASSAIC SOIL
CONSERVATION DISTRICT MAP C 1925)



APPENDIX III
FIELD PHOTOGRAPHS

PHOTOGRAPHIC ESSAY OF ON SITE CONDITIONS

PHOTO 1 (P-1) VIEW LOOKING SOUTH ALONG WESTERLY BOUNDARY WITH THE P.S.E. & G. ELECTRIC R.O.W. TAKEN WITHIN NORTHERLY BOUNDARIES.

PHOTO 2 (P-2) SOUTHEASTERLY VIEW LOOKING ACROSS THE CENTRAL PORTION OF THE SITE P.O.W. AREA REAR OF VIEW AT TREE LINE, TAKEN ALONG THE NORTHERLY SITE BOUNDARY AREA.

PHOTO 3 (P-3) NORTHERN DIRECTIONAL VIEW LOOKING TOWARD THE NEWARK AND JERSEY CITY TURNPIKE EXHIBITING FALLOW UPLAND FIELD CHARACTERISTICS WITHIN PREVIOUSLY FILLED AREA.

PHOTO 4 (P-4) VIEW LOOKING NORTHEASTERLY TOWARD CORNER OF TRACT. FOREGROUND AND MIDDLE GROUND VIEW UPLAND FALLOW FIELD PREVIOUSLY FILLED. MIDDLE VIEW AREA REVEALS PONDING RESULTING FROM IMPERMEABLE FILL MATERIAL.

PHOTO 5 (P-5) UPLAND AREA VIEW OF FALLOW FIELD CONDITIONS. P.O.W. AREA 'A' MIDDLE REAR OF VIEW AT FARTHEST TREE LINE LOOKING SOUTHEAST.

PHOTO 6 (P-6) SIMILAR DIRECTIONAL VIEW AS P-5 SHOWING DISTURBANCE CREATED BY UNCONSOLIDATED FILL ALONG THE NORTHERLY LIMIT OF WETLAND AREA 'A' (P.O.W.) NEAR FLAGPOINT A-3 TAKEN ABOVE THE DELINEATED LINE.

PHOTO 7 (P-7) VIEW LOOKING IN SIMILAR DIRECTION WITHIN WETLAND AREA 'A' MINOR VARIATIONS OF PALUSTRINE HABITAT CONDITIONS WITHIN THIS MAJOR P.O.W. SUBSYSTEM.

PHOTO 8 (P-8) EASTERLY VIEW LOOKING TOWARD NJ TURNPIKE HIGHWAY BERM SHOWING PEM HABITAT CONDITIONS WITHIN WETLAND AREA 'A' AND LOOKING TOWARD FLAGPOINTS 54-55.

PHOTO 9 (P-9) NORTHERLY DIRECTIONAL VIEW SHOWING P.O.W. WETLAND AREA 'A' AND AREA OF PREVIOUS UNCONSOLIDATED FILL SURROUNDING THE AREA TO THE WEST OF THE POND.

PHOTO 10 (P-10) UPLAND AREA OF FALLOW FIELD LOOKING TOWARD THE NORTHWEST CORNER OF THE TRACT.

PHOTO 11 (P-11) UPLAND AREA VIEW OF FALLOW FIELD CONDITIONS LOOKING TOWARD THE WESTERN BOUNDARY OF THE TRACT WITH THE ELECTRIC R.O.W. AND ADJACENT INDUSTRY PARALLELING THIS BOUNDARY.

PHOTO 12 (P-12) SIMILAR UPLAND VIEW LOOKING TOWARD THE SOUTHWEST CORNER OF THE TRACT.

PHOTO 13 (P-13) VIEW OF HEADWATER AREA OF WETLAND AREA 'C' TAKEN FROM FILL BANK LOOKING SOUTH AT FENCE BOUNDARY VIEW SOUTHWEST OF BERM SEPARATING WETLAND AREA 'A'. AREA REPRESENTATIVE

A DRAINAGE SWALE AREA RUNNING TOWARD THE SOUTHWEST CORNER OF THE SITE.

PHOTO 14 (P-14) VIEW WITHIN DRAINAGE SWALE WITHIN THE SOUTHERLY BOUNDARY OF THE SITE SHOWING TYPICAL HABITAT CONDITIONS WITHIN WETLAND AREA 'C' AT THE SOUTHERN BOUNDARY. LOOKING TOWARD THE SOUTHWEST CORNER OF THE SITE.

PHOTO 15 (P-15) OPPOSITE DIRECTIONAL VIEW OF THE SOUTHERLY PORTION OF THE DRAINAGE SWALE LOOKING TOWARD THE HEADWATER AREA OF THIS DRAINAGE CORRIDOR.

PHOTO 16 (P-16) OPPOSITE DIRECTIONAL VIEW OF THE SOUTHERLY PORTION OF THE DRAINAGE SWALE LOOKING TOWARD THE HEADWATER AREA OF THIS DRAINAGE CORRIDOR.

PHOTO 17 (P-17) NORTHWESTERLY VIEW WITHIN UPLAND FALLOW FILL AREA LOOKING TOWARD THE WESTERLY PORTION OF THE DRAINAGE SWALE PARALLELING THE WESTERLY BOUNDARY OF THE SITE WITH THE ELECTRIC R.O.W.

PHOTO 18 (P-18) WESTERN VIEW OF CONDITIONS OF DRAINAGE SWALE ALONG THE WESTERN BOUNDARY OF THE SITE SHOWING INTERMITTENT PONDED AREAS SEPARATED BY OCCASIONAL FILL BERM. TAKEN ABOVE DELINEATED LINE NEAR FLAGPOINT C-36.

PHOTO 19 (P-19) NORTHERN VIEW TAKEN OUTBOUND WITHIN THE ELECTRIC CO. R.O.W. SHOWING TYPICAL CONDITIONS WITHIN THIS AREA OF THE SITE PARALLELING THE WESTERN BOUNDARY OF THE SITE RIGHT AND OUTBOUND OF VIEW.

PHOTO 20 (P-20) OPPOSITE VIEW OF P-19 WITHIN R.O.W. LOOKING TOWARD SOUTHWEST CORNER OF THE SITE. SITE LEFT AND OUTBOUND OF VIEW.



PHOTO-1



PHOTO-2



PHOTO-3



PHOTO-4



PHOTO-5



PHOTO-6



PHOTO-7



PHOTO-8



PHOTO-9



PHOTO-10

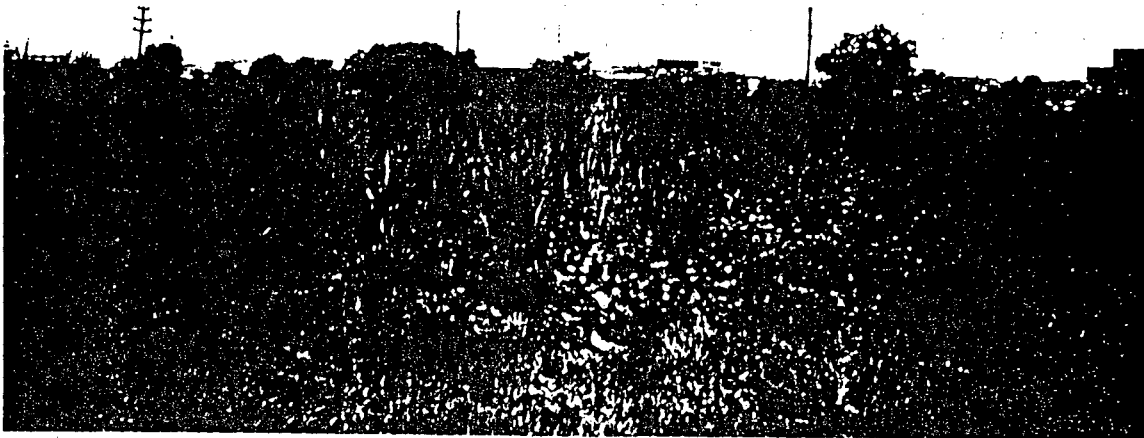


PHOTO-11



PHOTO-12



PHOTO-13

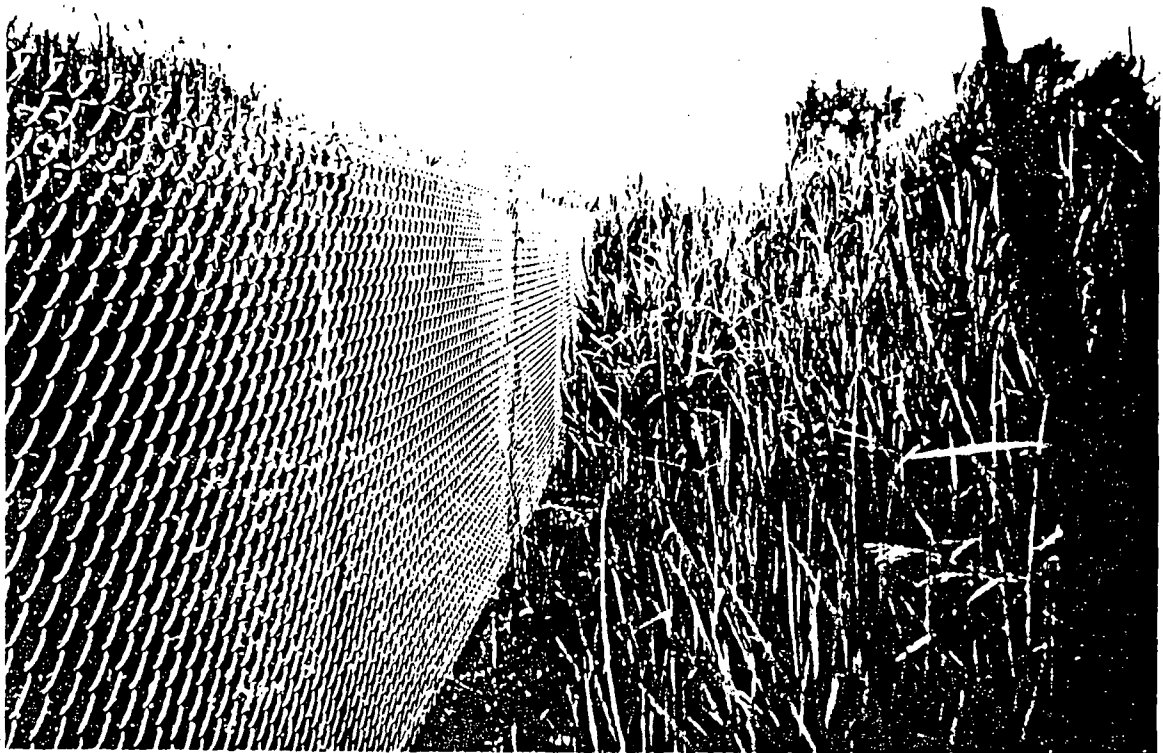


PHOTO-14



PHOTO-15



PHOTO-16



PHOTO-17



PHOTO-18



PHOTO-19

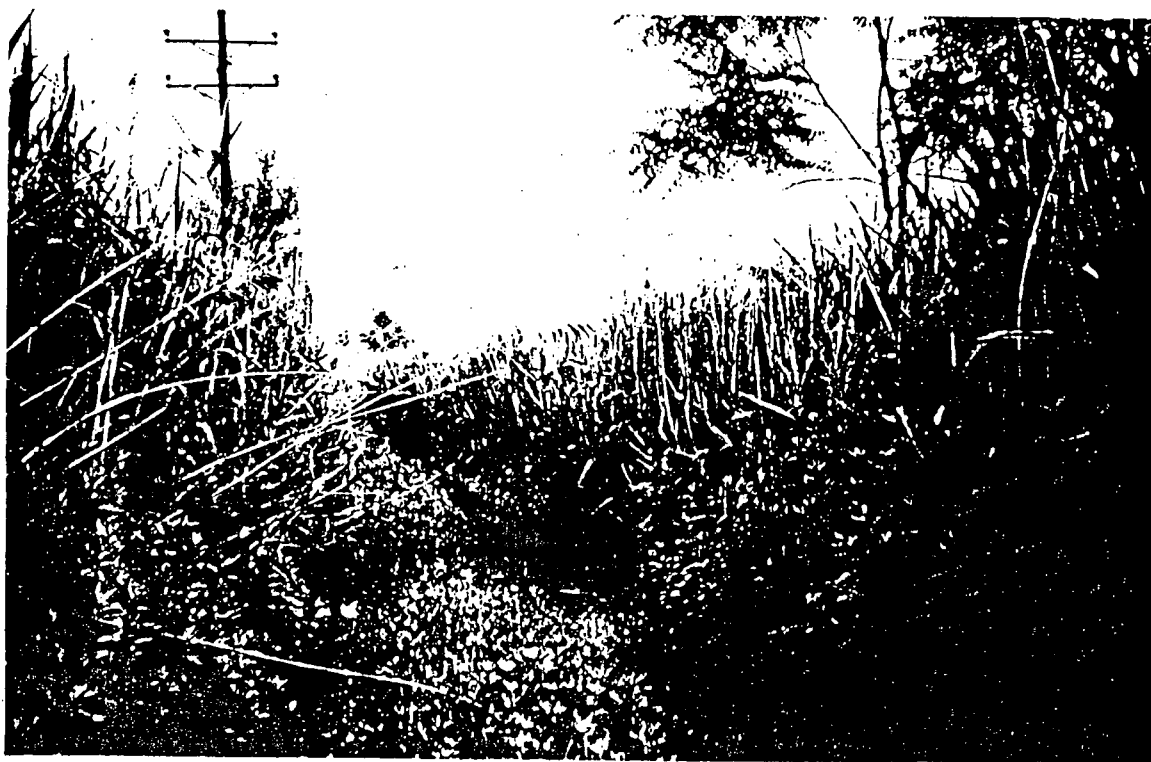


PHOTO-20

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WETLANDS LOCATION MAP
LOTS 3, 15, 14, BLOCK 294
HUDSON MEADOWS

TOWNSHIP OF KEARNY
HUDSON COUNTY, NEW JERSEY

Victor Vinegra
VICTOR VINEGRA P.E. & L.S. 11659

DRAWN BY:

CHECKED BY:

PROJECT #

FIELD BOOK #

D.M.P.

V.E.V.

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